

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in view of the present amendment and in light of the following discussion, is respectfully requested.

Claims 12-14, 17, and 22-26 are pending. In the present amendment, Claims 12 and 23 are currently amended, Claims 18 and 19 are canceled without prejudice or disclaimer, and new Claims 25 and 26 are added. Support for the present amendment can be found in the original specification, for example, at page 12, lines 27-37, at page 13, lines 16-39, and in Figures 1a-4. Thus, it is respectfully submitted that no new matter is added.

In the outstanding Office Action, Claims 12, 19, and 23 were rejected under 35 U.S.C. § 103(a) as unpatentable over Schiminski et al. (U.S. Patent No. 4,431,138, hereinafter “Schiminski”) in view of Green (U.S. Patent No. 3,041,663) and Schippers et al. (U.S. Patent No. 5,016,829, hereinafter “Schippers”); Claims 13, 17, and 24 were rejected under 35 U.S.C. § 103(a) as unpatentable over Schiminski in view of Green and Schippers, and further in view of Westrich (U.S. Patent No. 6,105,896); and Claims 14, 18, and 22 were rejected under 35 U.S.C. § 103(a) as unpatentable over Schiminski in view of Green and Schippers, and further in view of Sakurauchi et al. (Japanese Publication No. 06-329437, hereinafter “Sakurauchi”).

Turning now to the rejections under 35 U.S.C. § 103(a), Applicants respectfully request reconsideration of these rejections and traverse these rejections, as discussed below.

Independent Claim 12 recites:

A winding machine, comprising:
a frame including a barrel positioned on the frame;
at least two spindles fastened to the barrel, each of the spindles being configured to support at least one cake and to be movable in rotation about a first axis substantially perpendicular to a diameter of the cake;
a thread drawer including at least two motor-driven rollers configured to hold at least one thread at a first position

before the thread is attached to any of the at least two spindles, the rollers being fastened to the frame of the winding machine at a position directly below the at least two spindles;

a straight ejector positioned above the at least two spindles and configured to move the thread from the first position to a second position such that the thread is attached to one of the spindles;

at least one positioning and guidance device configured to position and guide the at least one thread on the spindles;

a linear actuator configured to continuously drive the spindles linearly in forward and reverse directions along the first axis during winding of the at least one thread; and

a thread retraction device positioned above the at least one positioning and guidance device and configured to displace the at least one thread by grasping the thread and rotating between the second position, in which the at least one thread is attached to the one of the spindles and retracted from the positioning and guidance device, and a third position, in which the at least one thread is engaged with the positioning and guidance device,

wherein the barrel is mounted movably in rotation with respect to the frame along a third axis of rotation substantially parallel to the first axis.

Accordingly, the winding machine recited in amended Claim 12 includes a thread drawer having two motor-driven rollers that hold the thread in a first position before the thread is attached to any of the spindles. Further, the winding machine includes a straight ejector positioned above the spindles. The straight ejector moves the thread from the first position before the thread is attached to the spindles to a second position such that the thread is attached to one of the spindles. Thus, the straight ejector moves the thread to a position where the spindles can rotate to form a cake from the thread. It is respectfully submitted that the cited references do not disclose or suggest every feature recited in amended Claim 12.

Initially, it is noted that Schiminski, Green, Schippers, and Westrich do not disclose or suggest how the thread is first attached to one of the spindles to begin rotating to form the

cake. Additionally, these references do not disclose or suggest rollers positioned below the spindles that hold the thread before the thread is attached to one of the spindles.

Regarding the last reference cited in the Office Action, Sakurauchi describes a class fiber rolling-up machine 1 including a main part 2, a turret board 3 attached to the main part 2, and a pair of spindles collets 4 attached to the turret board 3.¹ Further, Sakurauchi describes two bobbins 5 fit into each collet 4 and that a glass fiber strand 8 is to be wound around the bobbins 5.² Sakurauchi further describes pull roller equipment 22 fit into the collet 4 which has a pair of rollers 22a and 22b which hold the strand 8 spun from the melting tub 6.³ Further, Sakurauchi describes a forcing guide 27 which moves the strand 8 held by the pull roller equipment 22 to a position where the strand 8 is twisted around the bobbin 5.⁴

However, it is respectfully submitted that Sakurauchi does not disclose or suggest “a thread drawer including at least two motor-driven rollers configured to hold at least one thread at a first position before the thread is attached to any of the at least two spindles, the rollers being fastened to the frame of the winding machine at a position directly below the at least two spindles; a straight ejector positioned above the at least two spindles and configured to move the thread from the first position to a second position such that the thread is attached to one of the spindles,” as recited in amended Claim 12.

Instead, as can be seen in Drawing 1 of Sakurauchi, the pull roller equipment 22 is not formed directly below the bobbins 5. Additionally, the forcing guide 27 is not positioned above the bobbins 5. Accordingly, in order for the forcing guide 27 to move the glass fiber strand 8 to a position in which it can contact the bobbins 5, the forcing guide 27 must move a great distance and put a higher stress on the strand 8 than compared with the claimed thread drawer and straight ejector. Thus, it is respectfully submitted that the pull roller equipment

¹ See Sakurauchi, at paragraph [0011] and in Drawing 1.

² See Sakurauchi, at paragraphs [0011] and [0012] and in Drawing 1.

³ See Sakurauchi, at paragraph [0013] and in Drawings 1-3.

⁴ See Sakurauchi, at paragraph [0014] and in Drawings 1 and 2.

22 and the forcing guide 27 described in Sakurauchi are not the claimed thread drawer and straight ejector.

Accordingly, it is respectfully submitted that none of the cited references either alone or in any combination thereof disclose or suggest every feature recited in amended Claim 12. Thus, it is respectfully submitted that Claim 12, and all claims dependent thereon, patentably define over the cited references.

Independent Claim 23 recites, in part, a method for winding cakes, comprising “holding at least one thread at a first position with rollers before the thread is attached to the first spindle or the second spindle, the rollers being fastened to the frame of the winding machine at a position directly below the first spindle and the second spindle; moving the thread from the first position to a second position with a straight ejector positioned above the first spindle and the second spindle such that the thread is attached to the first spindle.”

Accordingly, in view of the above discussion of the cited references with respect to Claim 12, it is respectfully submitted that none of the cited references, either alone or in any combination thereof, disclose or suggest every feature recited in amended Claim 23. Thus, it is respectfully submitted that Claim 23, and Claim 24 which is dependent thereon, patentably define over the cited references.

New Claims 25 and 26 are added by the present amendment. Support for new Claims 25 and 26 can be found in the original specification, for example, at page 13, lines 16-39 and in Figure 3a. Thus, it is respectfully submitted that no new matter is added.

It is noted that Claims 25 and 26 depend on Claims 12 and 23, and thus are believed to be patentable for at least the reasons discussed above with respect to Claims 12 and 23.

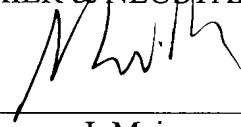
Further, new Claim 25 recites, in part, “the thread overlaps a distal end of the one of the spindles when the thread is held at the first position.” Accordingly, as can be seen in Figures 3a and 3b, the thread in the first position before contacting the spindles overlaps a

distal end of one of the spindles. Thus, the thread does not have to be stretched very far in order to be moved to a second position shown in 3B where the thread contacts the spindle. As can be seen in Drawing 1 of Sakurauchi, the fiber 8 would not overlap a distal end of either of the bobbins 5 before the thread 8 contacts the bobbins. Thus, it is respectfully submitted that Claim 25, and Claim 26 which recites similar features to Claim 25, further patentably define over the cited references.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application and the present application is believed to be in condition for formal allowance. A Notice of Allowance is earnestly solicited.

Respectfully submitted,

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